

What is claimed is:

10090350-030402

1. A magnetic recording disk, comprising:

a substrate;

a magnetic recording layer prepared on the substrate; and

an anisotropy-allowing layer provided between the substrate and the magnetic recording disk;

the anisotropy-allowing layer allowing magnetic anisotropy to the magnetic recording layer;

the anisotropy-allowing layer being made of nitride of niobium, tantalum, niobium alloy or tantalum alloy; or nitrogen-including niobium, tantalum, niobium alloy or tantalum alloy.

2. A magnetic recording disk as claimed in claim 1,

the surface of the anisotropy-allowing layer being denaturalized by exposing to atmospheric gas, nitrogen gas or oxygen gas.

3. A method for manufacturing a magnetic recording disk,

comprising:

a step of magnetic-recording-layer preparation on a substrate; and

a step preparing an anisotropy-allowing-layer on the substrate prior to the magnetic-recording-layer preparation;

the anisotropy allowing layer allowing magnetic anisotropy to the magnetic recording layer;

the anisotropy-allowing layer being made of nitride of niobium, tantalum, niobium alloy or tantalum alloy; or nitrogen-including niobium, tantalum, niobium alloy or tantalum alloy.

4. A method for manufacturing a magnetic recording disk as claimed in claim 3,

comprising a step exposing the prepared anisotropy-allowing layer to atmospheric gas, nitrogen gas or oxygen gas.

5. A method for manufacturing a magnetic recording disk as claimed in claim 3,

the anisotropy-allowing layer being a film deposited by sputtering as relatively a larger number of sputtered particles having the direction component along the direction of the magnetic anisotropy to allow are incident on the substrate.

6. A method for manufacturing a magnetic recording disk as claimed in claim 4,

the anisotropy-allowing layer being a film deposited by sputtering as relatively a larger number of sputtered particles having the direction component along the direction of the magnetic anisotropy to allow are incident on the substrate.

7. A system for manufacturing a magnetic recording disk, comprising:

a magnetic-recording-layer preparation chamber in which a magnetic recording layer is prepared on a substrate;

an anisotropy-allowing layer preparation chamber in which an anisotropy-allowing layer to allow magnetic anisotropy to the magnetic recording layer is prepared on the substrate prior to preparation of the magnetic recording layer; and

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a transfer mechanism for transferring the substrate from the anisotropy-allowing layer preparation chamber to the magnetic recording layer preparation chamber;

the anisotropy-allowing layer being made of nitride of niobium, tantalum, niobium alloy or tantalum alloy; or nitrogen-including niobium, tantalum, niobium alloy or tantalum alloy.

8. A system for manufacturing a magnetic recording disk as claimed in claim 7, comprising;

a gas-exposure chamber in which the prepared anisotropy-allowing layer is exposed to atmospheric gas, nitrogen gas or oxygen gas, prior to preparation of the magnetic recording layer in the magnetic-recording-layer preparation chamber.

9. A system for manufacturing a magnetic recording disk as claimed in claim 7,

the anisotropy-allowing layer preparation chamber being one in which a film as the anisotropy-allowing layer is deposited by sputtering, as relatively a larger number of sputtered particles

having the direction component along the direction of the magnetic anisotropy to allow are incident on the substrate.

10. A system for manufacturing a magnetic recording disk as claimed in claim 8,

the anisotropy-allowing layer preparation chamber being one in which a film as the anisotropy-allowing layer is deposited by sputtering, as relatively a larger number of sputtered particles having the direction component along the direction of the magnetic anisotropy to allow are incident on the substrate.